

## Abstract

**Objectives:** Living in ethnic enclaves may protect racial/ethnic minority populations from discrimination and stress by facilitating positive intergroup relations in those neighborhoods. This study examines how two different aspects of ethnic enclaves—neighborhood ethnic concentration and cultural institutions—are associated with discrimination and stress among Asian American women, and how these associations differ by nativity and time lived in the U.S. **Methods:** A community-based survey of Asian American women with geocoded residential addresses was linked with U.S. Census and business listing data. We created neighborhood variables of ethnic concentration and number of Asian cultural institutions. Analyses consisted of linear regression predicting day-to-day discrimination, general stress, and immigration stress. **Results:** Findings revealed that for established immigrants and U.S.-born, higher ethnic concentration was associated with higher discrimination and general stress. For recent immigrants, higher ethnic concentration was associated with lower discrimination, general stress, and immigration stress. For all Asian American women, living in neighborhoods with more cultural institutions was associated with lower discrimination. For recent immigrants, living in neighborhoods with more cultural institutions was associated with lower general stress. **Conclusions:** This study highlights how ethnic enclaves are associated with discrimination and stress experiences differently, depending on nativity and time in the U.S.

*Keywords:* Asian Americans, ethnic enclaves, discrimination, stress, immigrants

Ethnic Enclaves, Discrimination, and Stress among Asian American Women:  
Differences by Nativity and Time in the U.S.

Where people live can impact their experiences of discrimination and stress (Seaton, Gee, Neblett, & Spanierman, 2018). This is because one's neighborhood determines the types of interpersonal interactions that occur there (Diez Roux & Mair, 2010; Goto, Gee, & Takeuchi, 2002). Contact with neighbors who share similar social status and cultural background may lower the likelihood of intergroup conflicts (Pettigrew, 1998; Pettigrew, Tropp, Wagner, & Christ, 2011). Furthermore, community resources in neighborhoods, such as cultural institutions and civic organizations, can facilitate cooperation between neighbors (Carr, 2003). These neighborhood cultural resources may lower discrimination and stress for residents. This could be especially true for immigrants who would benefit most from culturally and linguistically concordant businesses and services (Clough, Lee, & Chae, 2013; Kim et al., 2011). If ethnic enclaves can indeed bestow benefits on residents by lowering discrimination and stress, then for whom are these neighborhoods most beneficial?

It is important to acknowledge that Asian Americans are quite heterogeneous (López, Ruiz, & Patten, 2017). They have origins from over 40 countries, speak different languages, and migrate for diverse reasons. Due to histories of war and political conflict, Asians from different countries may have resentments against one another which may continue upon migration to the U.S. At the same time, a common theme raised among Asian

American communities is the shared experience of discrimination and adjustment to new environments (Gee & Ponce, 2010; Sue et al., 2009).

Asian Americans are the fastest growing population in the U.S., and about 66% are foreign-born (López & Bialik, 2017; López et al., 2017). Foreign-born Asian Americans may be particularly vulnerable to experiencing stress that is related to their immigrant status, as they navigate life in U.S. society (Morey, Gee, Shariff-Marco, et al., 2018). There has been some research showing that the psychological well-being of Asian Americans varies, depending on the type of neighborhood that they live in (Hong, Zhang, & Walton, 2014; Lee et al., 2014; Syed & Juan, 2012). This literature focuses on the role of living in ethnic enclaves—defined here as geographic areas with high concentration of racial/ethnic minorities and immigrants that have cultural, social, and economic identity that is distinct from the majority group (Lim, Yi, Lundy De La Cruz, & Trinh-Shevrin, 2017). However, the research on the effects of living in Asian ethnic enclaves is mixed. Studies have shown that Asian immigrants may benefit from living in ethnic enclaves, as these neighborhoods facilitate important exchanges of social and economic capital, allowing immigrants to navigate a new country while maintaining linguistic and cultural ties (Osypuk, Diez Roux, Hadley, & Kandula, 2009; Walton, 2012). Other research paints a seemingly opposite picture—that Asian Americans living in ethnic enclaves had worse mental health than those who did not (Hong et al., 2014).

This variation in the literature might have a logical explanation. It could be that living in ethnic enclaves has the most benefit for recent Asian immigrants to the U.S., who need the cultural and linguistic support of co-ethnic neighbors and cultural institutions. Immigrants experience stress that is related to their migration experience, including the loss of ties to their country of origin and the hardships with navigating a different social structure (Hwang & Ting, 2008; Xu & Chi, 2013). Thus, living in ethnic enclaves might ease stress for recent immigrants. In contrast, more established immigrants and U.S.-born Asian Americans may not benefit as much from living in ethnic enclaves (Hong et al., 2014). Perhaps for them, living in ethnic enclaves may be in some cases detrimental due to the stigma in the broader culture associated with belonging to an immigrant group perceived as “foreigners” or “outsiders” even though they themselves identify as Americans. (Huynh, 2012; Morey, 2018; Ong, Burrow, Fuller-Rowell, Ja, & Sue, 2013).

Experiences of discrimination, general stress, and immigration stress may be especially salient for Asian American women. Asian American women may experience discrimination because of multiple marginalized aspects of their identities, including their race, gender, English proficiency, immigration status, skin color, or height and weight (Rosenthal, 2016; Seng, Lopez, Sperlich, Hamama, & Reed Meldrum, 2012). Asian American women often experience gendered racial discrimination in the form of being exoticized as sexual objects or subservient companions to White men (Museus & Truong,

2013; Sue, Bucceri, Lin, Nadal, & Torino, 2007). Furthermore, Asian American women report being ignored in everyday interactions, overlooked for leadership positions, or discounted in their opinions due to gendered, racial, and ageist discrimination (Mukkamala & Suyemoto, 2018). Previous research found that for Asian American women, nativity was strongly associated with mental disorders, but the same association was not found for men (Takeuchi et al., 2007). Lau et al. (2013) suggest that this is due to nativity differences in experiences of chronic stress due to minority status and low family support among Asian American women. The focus of this paper is discrimination, general stress, and immigration stress for Asian American women, and how these may differ by nativity and neighborhood factors.

### **Theoretical Framework**

Neighborhoods may influence people's experiences of discrimination and stress through the types of contact people have with their neighbors (Goto et al., 2002). Intergroup contact theory provides a framework for understanding the conditions under which prejudice between groups can be reduced. Intergroup contact theory was originally developed by Allport (1954) as a means for informing efforts to improve race relations. According to Allport, positive intergroup interactions can only occur in situations where four key conditions are met: (a) equal status, (b) common goals, (c) intergroup cooperation, and (d) the support of authorities, law or custom (Pettigrew, 1998; Pettigrew et al., 2011). Without these four ingredients, contact between groups that are different from each other in terms of race,

ethnicity, or religion are likely to result in negative attitudes and possible conflict. Therefore, discrimination and stress might be higher in the absence of these factors.

There are various ways that ethnic enclaves might facilitate positive interactions. First, neighborhoods are made up of people from various demographic backgrounds. Living around neighbors of similar races/ethnicities might lower the chance for encountering discrimination simply due to a lower probability of encountering outgroup members who may discriminate. Therefore, Asian American immigrants may benefit from living close to other Asian American immigrants, since they are less likely to have stressful interactions with other groups (Mossakowski & Zhang, 2014). This argument presumes that Asian Americans view each other as a collective (Park, 2008) due to shared experiences of immigrating to the U.S. and being marginalized in society (Iwamoto & Liu, 2010). If Asian Americans live in neighborhoods with similar Asian Americans who share the same social status and common goals, then positive interpersonal interactions may indeed occur, lowering discrimination and stress.

Secondly, there may be sociocultural resources within neighborhoods that help facilitate positive intergroup contact (Wang, 2013). Organizations and institutions in ethnic enclaves may provide opportunities for neighbors to interact in positive ways (Carpiano, 2006; Zhou, 2005), allowing people to come together to meet common goals or share common interests (Collins, Neal, & Neal, 2014). Examples include organizations that bring people

together around cultural, recreational, or religious interests. For Asian Americans, these cultural institutions can provide vital means for engaging with one another, sharing socioeconomic resources, and facilitating social and political capital (Joassart-Marcelli, 2013). Asian American cultural institutions supply their communities with services and capital that are culturally- and linguistically-specific (Liu, Miller, & Wang, 2014; Wen, Lauderdale, & Kandula, 2009). This may lessen the need for Asian Americans to seek these same services from institutions that lack the same cultural awareness and/or language-specific resources, where they may be more likely to face interpersonal and structural forms of discrimination (Clough et al., 2013; Gee & Ford, 2011). Returning to intergroup contact theory, cultural institutions may facilitate positive group interactions through common goals, intergroup cooperation, and support of authorities (Pettigrew, 1998), lowering discrimination and stress for Asian American residents.

We expect that the benefits of living in ethnic enclaves will differ between recent immigrants versus established immigrants, and between U.S.-born Asian Americans. Recent Asian immigrants to the U.S. may have most to gain from living in ethnic enclaves (Logan, Zhang, & Alba, 2002; Roy, Hughes, & Yoshikawa, 2013). For them, living near other Asian immigrants who share equal status and common goals may help them to navigate similar challenges (Mossakowski & Zhang, 2014). Living in ethnic enclaves with cultural institutions that facilitate cooperation and represent authoritative support for Asian American immigrants may also lower



discrimination and stressful experiences for recent immigrants (Gee, 2002; Vega, Ang, Rodriguez, & Finch, 2011).

Established immigrants who have lived in the U.S. for many years may not face the same challenges as recent immigrants. Having already grown accustomed to life in the U.S., established immigrants may not share goals or equal status with more recent immigrants (Portes & Zhou, 1993).

Established immigrants may also have more contact with groups outside of their residential neighborhood (Viruell-Fuentes, Morenoff, Williams, & House, 2013), leading to more experiences of discrimination and stress. Further, established immigrants may not need to rely as much on cultural institutions in their neighborhoods, since they are more accustomed to American life.

U.S.-born Asian Americans may have the least to gain from living in ethnic enclaves. U.S.-born Asian Americans may not share the same social status or common goals as Asian American immigrants (Zhou, 2014). They do not experience stress related to being immigrants. It is also possible that U.S.-born Asian Americans have the most contact with people outside of their own racial/ethnic background and culture, as shown for U.S.-born Latinos (Viruell-Fuentes et al., 2013), making them more aware of discrimination in the U.S.

### **The Present Study**

This study examines how intergroup contact in ethnic enclaves is associated with day-to-day discrimination, general stress, and immigration stress among Asian American women, and whether these associations differ

by nativity and length of time lived in the U.S. The two aspects of ethnic enclaves that we examine are ethnic concentration and cultural institutions, both of which may influence the types of intergroup contact that occurs in neighborhoods. We tested the following hypotheses:

H1: Residing in neighborhoods with higher ethnic concentration is associated with lower discrimination, general stress, and immigration stress, above and beyond known individual-level and neighborhood-level risk factors.

H2: Residing in neighborhoods with more cultural institutions is associated with lower discrimination, general stress, and immigration stress, above and beyond known individual-level and neighborhood-level risk factors.

H3: Nativity and time lived in the U.S. moderates these associations, such that both neighborhood ethnic concentration and neighborhood cultural institutions lowers discrimination and stress more for recent immigrants than for established immigrants and U.S.-born Asian Americans.

## **Method**

### **Participants**

The sample consisted of 482 Asian American women living in the San Francisco Bay Area in California ages 20 and older who were surveyed between 2013 and 2014 as part of the Asian Community Health Initiative, a study of breast cancer risk. We used only the sample of women without breast cancer for this study. Using data from the California Health Interview

Survey as comparison, the sample was found to be similar to the target population of Asian American women in the San Francisco Bay Area on key demographics (Wong et al., 2016). Sampling involved several recruitment strategies: online-based methods, address-based sampling, and community health centers. Women were surveyed using telephone interviews, followed by an additional mailed survey. Interviews were conducted by bilingual interviewers in one of the following languages according to participant preference: English, Mandarin, Cantonese, or Tagalog. Materials were translated and back translated. Of the 482 participants, 30 did not complete the mailed survey. An additional 28 people (6%) had missing data on at least one of the variables of interest. Analyses proceeded with only those participants without missing data ( $n=424$ ).

All participants completed informed consent. The study received ethics approval by the Cancer Prevention Institute of California Institutional Review Board.

### **Measures**

The three dependent variables were day-to-day discrimination, general stress, and immigration stress.

**Day-to-day discrimination.** We operationalized day-to-day discrimination as unfair treatment experienced in a person's everyday life over the past year. Respondents reported how often over the past 12 months they experienced nine discriminatory events, including items such as "have you been treated with less respect than other people" and "have people

acted as if they are afraid of you?" (Shariff-Marco et al., 2009; Williams, Yan, Jackson, & Anderson, 1997). Responses used a four-point Likert scale (never, rarely, sometimes, or often). In this study, we measured day-to-day discrimination as the mean of the responses for the nine possible events, with a potential range of zero to three ( $\alpha=0.82$ ). Higher scores indicated more discrimination.

**General stress.** We appraised general stress using an adapted version of Cohen's Perceived Stress Scale, which measures the degree to which the situations in one's life are appraised as stressful (Cohen, Karmarck, & Mermelstein, 1983). Our version included 10 items worded to appraise stress over the past 12 months. Items included, "How often did you feel that you were unable to control the important things in your life?" and, "How often have you felt that things were going your way?" The responses used a five-point Likert scale (never, almost never, sometimes, fairly often, and very often), with positively stated items reverse-coded. The perceived general stress score was the mean of the 10 items, with higher scores indicating greater stress ( $\alpha=0.85$ ).

**Immigration stress.** Only foreign-born women were asked about immigration stress. We defined immigration stress as perceived stress attributed to living in the U.S. as an immigrant. We measured this using an adapted version of the Noh Acculturative Stress Index with 14 items that asked whether the respondent feels that living in the U.S. is stressful, for example, because you "lack of opportunity to visit your country of origin"

and “because you are treated as an outsider by other Americans” (Noh & Avison, 1996). Responses used a four-point Likert scale for how often these feelings are experienced (never, sometimes, often, or very often). The immigration stress score was the mean of the responses to the 14 items, with a potential range of one to four ( $\alpha=0.83$ ). Higher scores indicated greater immigration stress.

The main independent variables of interest were two aspects of ethnic enclaves—ethnic concentration and neighborhood cultural institutions.

**Ethnic concentration.** We created the ethnic concentration measure at the 2000 U.S. Census block group level (Gomez et al., 2011). Researchers used principal component analysis (PCA) to select the following four factors from the 2000 U.S. Census to create the index: percentage of Asians, percentage of recent immigrants, percentage of Asian language-speaking households that are linguistically isolated (no person over the age of 14 years in the household speaks English “very well”), and percentage of Asian language-speaking residents with limited English proficiency. Researchers categorized block groups into quintiles using the California statewide distribution of these factors, with one representing the least ethnic and five representing the most ethnic neighborhoods. In this sample, most respondents (72.4%) lived in block groups with the highest ethnic enclave quintile and few lived in the lowest quintiles. Therefore, we dichotomized the Asian ethnic concentration variable into high ethnic concentration (highest quintile) and lower ethnic concentration (bottom 4 quintiles).

**Neighborhood cultural institutions.** We defined neighborhood cultural institutions as businesses that have potential cultural or social meaning in the Asian ethnic community. We gathered business data from the Walls & Associates' National Establishment Time-Series Database, which utilizes data from Dun and Bradstreet®. First, we used Standard Industrial Classification (SIC) codes, a standard system for classifying common industries, to identify businesses that possess cultural or social meaning. We identified the following types of institutions using the SIC codes: religious organizations, social organizations, recreational places, civic organizations, theatrical organizations, schools, museums, and libraries. Next, we developed a list of keywords to identify the cultural institutions that serve the Asian American community specifically. A few examples of the keywords used in the search for Asian serving institutions were "Asian," "Chinatown," "Pinoy," "Vietnamese," and "Nisei." We then geocoded the addresses of the cultural institutions and the addresses of survey respondents onto maps using Texas A&M Geoservices Desktop Geocoding Client (Texas A&M Geoservices, 2013). We considered any cultural institution that fell within a 1,600-meter network distance from respondent's residential address to be within her neighborhood. This distance represents any cultural institution that could be reasonably accessed by walking or taking a short car ride from one's home in order to reach it (Thornton, JR, & Kavanagh, 2011). The total number of Asian neighborhood cultural institutions was highly skewed, such that the number of cultural institutions ranged from zero to 76 in

respondents' neighborhoods, but 32% of respondents' neighborhoods had no cultural institutions and 30% of respondents' neighborhoods had one or two cultural institutions. Therefore, we categorized this variable into neighborhoods having zero, one to two, or three or more neighborhood cultural institutions.

**Nativity and time in the U.S.** We included nativity and time in the U.S. as a potential moderator of the association between ethnic enclaves and the outcomes of discrimination and stress. Researchers determined nativity by self-report. For foreign-born respondents, we distinguished between established immigrants and recent immigrants using age at immigration and age at interview to calculate percentage of their lives that they lived in the U.S. We used a 50% cut-off to define established immigrants (foreign-born who lived 50% or more of their lives in the U.S.) and recent immigrants (foreign-born who lived less than 50% of their lives in the U.S.) (Leu, Walton, & Takeuchi, 2011). The variable for nativity and time in the U.S. included three categories: (a) U.S.-born ( $n=143$ ), (b) established immigrants ( $n=104$ ), and (c) recent immigrants ( $n=183$ ).<sup>1</sup>

**Demographic variables.** We controlled for *age* (continuous), *marital status* (currently married, formerly married, or single), *Asian ethnicity*

<sup>1</sup> In sensitivity analyses, we considered other ways of distinguishing between established and recent immigrants—including using age at immigration. After running the analyses, the results were similar (results not shown, but available upon request).

(Chinese, Filipina, and other Asian), and *education* (college graduate, some college, or high school graduate or less). Including these control variables allowed us to rule out confounding due to these individual demographic characteristics (Cairney, Boyle, Offord, & Racine, 2003; Chau, 2016; Cohen & Janicki-Deverts, 2012; Taylor, McLoughlin, Meyer, & Brooke, 2013).

**Neighborhood socioeconomic status.** We controlled for confounding by neighborhood socioeconomic status, which may be associated with ethnic neighborhoods and the outcomes of interest (Hong et al., 2014; Santiago, Wadsworth, & Stump, 2011). The literature often notes that Asian ethnic enclaves show more variation in neighborhood socioeconomic status than enclaves for other racial/ethnic groups (Logan, 2011). By controlling for it, we isolated the effect of ethnic enclaves on the outcomes from the effect of neighborhood socioeconomic status.

Neighborhood socioeconomic status at the block group-level was based on the Yang Index, which is based on PCA of seven components from the 2007-2011 American Community Survey: education index, median household income, percent living 200% below poverty level, percent blue-collar workers, percent older than 16 in workforce without a job, median rent, and median house value (Yang et al., 2014). Researchers calculated quintiles of neighborhood socioeconomic status based on the California-wide distribution of the index scores, with quintile one indicating the lowest and quintile five indicating the highest neighborhood socioeconomic status. In this sample, few respondents lived in the lowest quintiles. Therefore, we dichotomized



this index into high (index=4 or 5) and low (index $\leq$ 3) neighborhood socioeconomic status.

**Neighborhood perceptions.** We included respondents' perceptions of their neighborhood environments as control variables, to further control for sources of spuriousness (Hill & Maimon, 2013). Participants living in ethnic enclaves may perceive their neighborhoods to be safer or have fewer problems, and these perceptions could be associated with stress and discrimination. By controlling for these perceptions, we can further isolate the association between ethnic enclaves, discrimination, and stress, independent of people's subjective perceptions of their neighborhood.

*Neighborhood safety* was measured using a single item: "How often do you feel safe in your current neighborhood?" Responses were coded on a four-point Likert scale ranging from one to four, with higher scores indicating greater perceived safety. *Neighborhood problems* were measured by asking respondents whether the following five items are problems in their neighborhood: neighborhood crime, traffic, excessive noise, trash/litter, and lighting at night. We coded each of the five items on a four-point Likert scale ranging from zero to three, with higher scores indicating a more serious problem. We summed scores across the five items, for a range of zero to 15, so that higher scores indicate more severe neighborhood problems ( $\alpha=0.81$ ).

### **Analysis**

We analyzed data using multivariable linear regression models adjusted for clustering at the Census block group level to account for the

potential autocorrelation. We conducted separate sets of analyses for the two measures of ethnic enclaves, one examining the association between ethnic concentration and the outcomes, and a second examining the association between neighborhood cultural resources and the outcomes.

We conducted analyses in two steps. For each outcome, Step 1 tests Hypothesis 1 and 2 that living in ethnic enclaves is associated with discrimination, general stress, and immigration stress above and beyond known individual-level and neighborhood-level stressors. When immigration stress was the outcome, we included only those who were foreign-born in analyses. Step 2 tests Hypothesis 3, which examines whether the associations are moderated by nativity and time in the U.S. In all regression models, we controlled for age, marital status, Asian ethnicity, education, neighborhood socioeconomic status, neighborhood safety, and neighborhood problems. To counteract the problem of making type I errors with multiple comparisons, we adjusted the significance threshold using the Šidák correction ( $\alpha=0.017$ ). To facilitate interpretation, we graphed the statistically significant interactions. We conducted analyses using Stata v.15 (StataCorp, 2017).

## **Results**

### **Participant Characteristics**

Table 1 presents descriptive statistics for the overall sample and stratified by nativity and time in the U.S. The average age of the sample was 51.1 years-old, with U.S.-born being slightly younger (48.4 years-old) and

recent immigrants being slightly older (52.9 years-old). Recent immigrants were more likely to be married, to be Chinese, and to have a high school degree or less than established immigrants and U.S.-born. The neighborhoods in which recent immigrants lived were more likely to be low socioeconomic status, to be perceived as less safe, and perceived to have fewer neighborhood problems. Recent immigrants were also more likely to live in neighborhoods with high ethnic concentration that had more cultural institutions.

“Table 1 about here”

### **Regression Analyses**

**Ethnic concentration.** Table 2 shows the associations between neighborhood ethnic concentration and the three outcomes, accounting for all covariates. Looking across all the unmoderated associations (Step 1), the findings show that high ethnic concentration was not significantly associated with any of the outcomes for all Asian American women. However, the moderated associations (Step 2) show that neighborhood ethnic concentration had significant associations with day-to-day discrimination and immigration stress that varied by nativity and time lived in the U.S. The moderated association for the outcome of general stress was marginally significant ( $0.017 < p < 0.05$  [p-values adjusted using Šidák correction]).

“Table 2 about here”

Higher discrimination, general stress, and immigration stress were associated with younger age and lower perceived neighborhood safety. More

day-to-day discrimination was additionally associated with having some college education compared to having a college degree, higher neighborhood socioeconomic status, and more neighborhood problems. Higher immigration stress was associated with being formerly married compared to being currently married.

“Figure 1 about here”

In Figure 1a, living in a neighborhood with high ethnic concentration was associated with more day-to-day discrimination compared to living in a neighborhood with low ethnic concentration among U.S.-born and established immigrants. The opposite was true for recent immigrants: living in neighborhoods with low ethnic concentration was associated with more day-to-day discrimination compared to those living in areas with high ethnic concentration. Recent immigrants who lived in areas of low ethnic concentration had the highest day-to-day discrimination scores, accounting for all else.

In Figure 1b, the results for general stress were similar as for day-to-day discrimination, although the magnitude of the differences between groups was less, and this association was marginally significant ( $0.017 < p < 0.05$ ). General stress was higher on average among recent immigrants and lower on average among U.S.-born. For established immigrants and U.S.-born, general stress is slightly higher among those living in neighborhoods with high ethnic concentration compared to those living in neighborhoods with low ethnic concentration. For recent immigrants

we found the opposite: living in areas with low ethnic concentration was associated with greater general stress than living in areas with high ethnic concentration.

Figure 1c shows that for established immigrants, living in neighborhoods with high ethnic concentration was associated with greater immigration stress than living in neighborhoods with low ethnic concentration. For recent immigrants the association was in the opposite direction: immigration stress was higher in areas of low ethnic concentration compared to areas of high ethnic concentration.

**Neighborhood cultural institutions.** Table 3 displays the associations between number of neighborhood cultural institutions and the three outcomes, accounting for all covariates. The results for unmoderated associations (Step 1) show that for all Asian American women, living in a neighborhood with three or more cultural institutions was associated with lower day-to-day discrimination, compared to living in a neighborhood with no cultural institutions. Number of cultural institutions was not associated with general stress in the total sample, nor was it associated with immigration stress in the immigrant only sample.

“Table 3 about here”

The results for moderated associations (Step 2) indicated that there was a significant association between neighborhood cultural institutions and general stress that varied by nativity and time in the U.S. There were no other significant moderated associations.

“Figure 2 about here”

Figure 2 shows that for U.S.-born Asian Americans, living in neighborhoods with 1-2 or 3+ cultural institutions were associated with higher general stress than living in neighborhoods with 0 cultural institutions. For established immigrants, there was not a clear association between number of cultural institutions and general stress. Among recent immigrants, living in neighborhoods with 0 cultural institutions was associated with slightly higher general stress compared to those living in neighborhoods with 1-2 or 3+ cultural institutions. General stress was highest among recent immigrants who lived in neighborhoods with 0 cultural institutions.

### **Discussion**

In this study, we sought to determine whether Asian American women’s experiences of discrimination and stress were influenced by the ethnic character of their residential neighborhoods, and if so, how. To do this, we examined two aspects of ethnic enclaves—ethnic concentration and number of cultural institutions—and their associations with day-to-day discrimination, general stress, and immigration stress. We demonstrated that the associations differed among Asian American women by nativity and time in the U.S.

Initially, we did not find support for Hypothesis 1, that residing in neighborhoods with higher ethnic concentration was associated with lower discrimination, general stress, and immigration stress for all Asian Americans. We did find some support for Hypothesis 2. For Asian American

women in our study, living in neighborhoods with three or more cultural institutions was associated with less day-to-day discrimination. This finding points to the potential importance of cultural institutions as facilitators of positive intergroup interactions (Carr, 2003; Zukin, 2012), which can result in reducing discrimination among the residents in the neighborhoods they serve.

These findings provide new theoretical insights into why ethnic enclaves matter. Typically, ethnic enclaves are operationalized as ethnic concentration, yet, it is not fully clear why living with more co-ethnic peers may improve health (Lim et al., 2017; Roy et al., 2013).

Our data indicate that cultural institutions, but not ethnic concentration, was associated with to day-to-day discrimination. This suggests that it is not merely the presence of similar others, but rather, the institutions that co-ethnics build, that may help reduce societal prejudice and subsequent experiences of interpersonal discrimination. These ideas are consistent with the observations of many scholars that reducing prejudicial attitudes do little in terms of changing the broader structure of inequality; rather, changing structural inequalities requires building new institutions that protect marginalized groups (Bailey et al., 2017; Dubowitz et al., 2016; Geronimus et al., 2016; Seaton et al., 2018). Of course, these ideas are preliminary, but do encourage future research on cultural institutions as important components of ethnic enclaves.

A more nuanced story emerged when we tested Hypothesis 3 to see if the associations between ethnic enclaves, discrimination, and stress were being moderated by nativity and time in the U.S. Overall, these findings confirmed our hypothesis that ethnic enclaves benefit recent immigrants more so than established immigrants and U.S.-born Asian American women. Recent immigrants were the most prone to experiencing higher levels of general stress and immigration stress, compared to established immigrants and U.S.-born. Those recent immigrants who were living outside of ethnic enclaves reported experiencing the greatest discrimination and stress. Recent immigrants had the most to gain from living in ethnic enclaves, since living in neighborhoods with high ethnic concentration was associated with lower discrimination, general stress, and immigration stress compared to living in neighborhoods with low ethnic concentration. Additionally, neighborhoods with one or more cultural institutions was associated with lower general stress compared to living in neighborhoods without cultural institutions. These findings coincide with literature that suggests that having more social capital and social ties that results from living around other co-ethnic immigrants can ease the stressful transitions that recent immigrants endure (Viruell-Fuentes et al., 2013; Zhou & Kim, 2006). This study also finds the added value of cultural institutions in lowering general stress among recent immigrants, possibly by fostering intergroup cooperation and community support (Carr, 2003; Zhou & Cho, 2010). In sum, these results highlight the hardship that recent immigrants experience in the U.S., and the



protective value of living in ethnic enclaves to decrease stress and discrimination experiences.

Asian American women who were established immigrants did not experience the same benefits from living in ethnic neighborhoods as recent immigrants. In fact, for established immigrants, living in neighborhoods with high ethnic concentration was associated with reporting more discrimination, general stress, and immigration stress than living in neighborhoods with low ethnic concentration. It is quite possible that established immigrants—having lived in the U.S. most of their lives—no longer share similar status or goals as recent Asian American immigrants, even if they do share the same race. Established immigrants may also have more contacts with non-Asian groups outside of their residential neighborhoods, leading to more experiences of discrimination (Pyke & Dang, 2003). Being a resident of an ethnic enclave may be stigmatizing due to negative perceptions of outsiders of ethnic enclaves as places for only recent immigrants (Vo-Jutabha, Dinh, McHale, & Valsiner, 2009). Therefore, among established Asian American immigrant women, there is greater likelihood of negative intergroup interactions.

For U.S.-born Asian American women, living in ethnic immigrant enclaves was associated with higher day-to-day discrimination and general stress. These findings suggest that U.S.-born Asian American women experience more intergroup conflict when they live in neighborhoods with high ethnic concentration. It could be that these U.S.-born Asian American women are more racialized within U.S. society, such that they are more

aware of and likely to experience intergroup conflict with non-Asians when they live in immigrant communities (Goto et al., 2002). U.S.-born Asian American women are more likely to have interactions with people outside of their immediate neighborhoods (Viruell-Fuentes et al., 2013; Vo-Jutabha et al., 2009). Perhaps these U.S.-born Asian Americans who live in areas with high ethnic concentration are still perceived as foreigners by other groups, and this results in increased discrimination based on assumed foreign-born status from their non-Asian contacts (Gee, Ro, Shariff-Marco, & Chae, 2009; Morey, 2018; Morey, Gee, Muennig, & Hatzenbuehler, 2018).

It could also be the case that U.S.-born Asian American women experience stress and discrimination perpetrated by their co-ethnics in ethnic enclaves (Lee et al., 2014; Vo-Jutabha et al., 2009). They are perhaps more likely to experience internalized discrimination and also discrimination from co-ethnics in their neighborhoods who label them as too “whitewashed” (Pyke & Dang, 2003). Recent research highlighted that Asian American women experience gender discrimination from within their communities (Mukkamala & Suyemoto, 2018). Asian group members may attempt to enforce traditional gender roles on U.S.-born Asian American women, which may clash with Asian American women’s own gender expectations.

Drawing on contact theory, this study demonstrates that sharing similar status, common goals, and community support can result in positive intergroup interactions (Allport, 1954; Pettigrew et al., 2011), but the dynamics are complex for Asian American women who vary in nativity and

duration in the U.S. Recent Asian American female immigrants experience the most stress and discrimination, assumedly from interactions with non-Asians. These experiences are lessened by living around similar-status co-ethnics who are also immigrants and by living close to cultural institutions that provide community support and services that are culturally and linguistically concordant. On the other hand, U.S.-born Asian American women seem to experience more stress and discrimination when living around recent Asian American immigrants, possibly because the sources of stress and discrimination are coming from both non-Asians and other Asian Americans in their neighborhoods (Mukkamala & Suyemoto, 2018).

Therefore, there are differences in social status, goals, and community support needs within the broad Asian American category—due to the variation in nativity status, time in the U.S., and other potential sources of heterogeneity (e.g. socioeconomic status, occupation, language, country of origin, etc.)—that affect whether positive group interactions can occur in Asian ethnic neighborhoods.

This study has some limitations. The analysis was restricted to a community-based sample of Asian American women living in the San Francisco Bay Area. Therefore, the findings may not be generalizable to the broader population of Asian Americans in the U.S. It is also unknown whether similar findings would be found for Asian American men. Our ethnic concentration measure was limited to 2000 census data, as measures at the block-group level were unavailable in the 2010 census. However, we

conducted a sensitivity analysis measuring ethnic concentration at the 2010 census tract-level and findings were similar. We were unable in this study to disaggregate and analyze Asian American subgroups due to sample size restrictions. As Asian Americans are extremely heterogeneous in terms of country of origin, language, immigration history, and settlement in the U.S., future work should examine Asian American subgroups to provide understanding of the diverse experiences within different types of ethnic enclaves.

This study expands upon the literature on contact theory in ethnic neighborhoods, showing that living in neighborhoods where residents have similar status, common goals, and community support can improve intergroup relations for some (Goto Sharon, Gee Gilbert, & Takeuchi David, 2002; Pettigrew et al., 2011). We emphasize the importance of considering nativity and time in the U.S. when considering how Asian Americans experience discrimination and stress. Furthermore, our use of two distinct aspects of ethnic neighborhoods—ethnic concentration and cultural institutions—reveals the different mechanisms by which neighborhoods can contribute to well-being. Future research should continue to examine the diversity within Asian American populations and how they are affected by the social and cultural characteristics of the neighborhoods they live in.

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Table 1

*Descriptive statistics for total sample, U.S.-born, established immigrants, and recent immigrants*

Variable	Mean (SD) or %			
	Total ( <i>n</i> =430)	U.S.- born ( <i>n</i> =143)	Established immigrants ( <i>n</i> =104)	Recent immigrants ( <i>n</i> =183)
Age	51.1 (11.7)	48.4 (12.2)	51.7 (10.4)	52.9 (11.8)
Marital status				
married	66.7	59.4	63.5	74.3
formerly married	15.1	9.8	15.4	19.1
single	18.1	30.8	21.2	6.6
Asian ethnicity				
Chinese	53.7	42.0	55.7	61.8
Filipina	18.8	7.7	14.4	30.1
other Asian	27.4	50.4	29.8	8.2
Education				
college graduate	62.8	78.3	76.9	42.6
some college	20.0	19.6	16.4	22.4
high school degree or less	17.2	2.1	6.7	35.0
Neighborhood SES				
high	66.1	82.5	76.0	47.5
low	34.0	17.5	24.0	52.5
Neighborhood safety	3.2 (.8)	3.2 (.6)	3.4 (.7)	3.1 (.9)
Neighborhood problems	2.2 (2.6)	3.0 (2.6)	2.0 (2.5)	1.7 (2.6)
Ethnic concentration				
low	27.4	39.2	35.6	13.7
high	72.6	60.8	64.4	86.3
Neighborhood cultural resources				
0	31.6	28.7	38.5	30.1
1-2	30.0	40.6	25.0	24.6
3+	38.4	30.8	36.5	45.4
Day-to-day discrimination	.5 (.5)	.5 (.5)	.5 (.4)	.4 (.4)
General stress	2.7 (.6)	2.5 (.6)	2.6 (.6)	2.8 (.5)
Immigration stress	--	--	1.4 (.3)	1.6 (.4)

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*Note.* *SES* = socioeconomic status. Not all percentages may add up to 100%, due to rounding.

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Table 2

*Hierarchical Regression Analyses of Neighborhood Ethnic Concentration and Nativity Group Predicting Day-to-day Discrimination, General Stress, and Immigration Stress*

	Day-to-day discrimination n=430				General stress n=430				Immigration stress n=287			
	Step 1		Step 2		Step 1		Step 2		Step 1		Step 2	
	b	SE	b	SE	b	SE	b	SE	b	SE	b	SE
Intercept	0.53**	0.11	0.42**	0.11	2.95**	0.17	2.89**	0.18	1.62**	0.12	1.52**	0.12
Age	-0.09**	0.02	-0.08**	0.02	-0.08*	0.03	-0.08*	0.03	-0.05†	0.02	-0.04†	0.02
Marital status <sup>a</sup>												
Formerly married	0.11	0.07	0.09	0.06	0.13	0.08	0.12	0.08	0.16*	0.06	0.15*	0.06
Single	0.11	0.06	0.10	0.06	0.07	0.08	0.06	0.08	-0.05	0.06	-0.06	0.06
Asian ethnicity <sup>b</sup>												
Filipina	0.07	0.06	0.06	0.06	-0.08	0.08	-0.09	0.08	-0.04	0.05	-0.05	0.05
Other Asian	0.10	0.06	0.09	0.05	-0.09	0.07	-0.10	0.07	0.08	0.06	0.08	0.06
Education <sup>c</sup>												
Some college	0.13†	0.06	0.16*	0.06	0.04	0.08	0.06	0.08	-0.05	0.06	-0.03	0.06
High school degree or less	0.00	0.07	0.02	0.07	-0.04	0.08	-0.03	0.08	0.06	0.07	0.07	0.07
Low neighborhood SES <sup>d</sup>	-0.12*	0.05	-0.11*	0.04	0.01	0.07	0.01	0.07	0.05	0.05	0.05	0.05
Neighborhood safety	-0.06*	0.03	-0.06†	0.03	-0.14**	0.04	-0.14**	0.04	-0.08*	0.03	-0.08*	0.03
Neighborhood problems	0.02†	0.01	0.02*	0.01	0.02	0.01	0.02	0.01	0.02†	0.01	0.02†	0.01
Nativity and time in the U.S. <sup>e</sup>												
Established immigrant	0.01	0.06	0.09	0.09	0.12	0.08	0.11	0.12	ref		ref	
Recent immigrant	0.01	0.06	0.34*	0.12	0.28**	0.08	0.56**	0.14	0.19**	0.05	0.46**	0.09
High ethnic concentration <sup>f</sup>	0.04	0.05	0.20*	0.07	-0.02	0.07	0.08	0.11	-0.07	0.05	0.10	0.06
High ethnic concentration x established immigrant			-0.13	0.11			0.00	0.16			Ref	
High ethnic concentration x recent immigrant			-0.44**	0.13			-0.37†	0.16			-0.36**	0.10
R <sup>2</sup>	0.17		0.20		0.12		0.13		0.20		0.24	

Note. SES = socioeconomic status

<sup>a</sup> Relative to married. <sup>b</sup> Relative to Chinese. <sup>c</sup> Relative to college graduate. <sup>d</sup> Relative to high neighborhood SES. <sup>e</sup>

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Relative to U.S.-born for day-to-day discrimination and general stress. Relative to established immigrants for immigration stress. <sup>f</sup> Relative to low ethnic concentration.

\*\* p<0.0017, \* p<0.017, † p<0.05; p-values adjusted using Šidák correction for multiple comparisons.

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Figure 1.  
*Neighborhood ethnic concentration predicting day-to-day discrimination, general stress, and immigration stress, moderated by nativity and time in the U.S.*

Figure 1a. Day-to-day discrimination

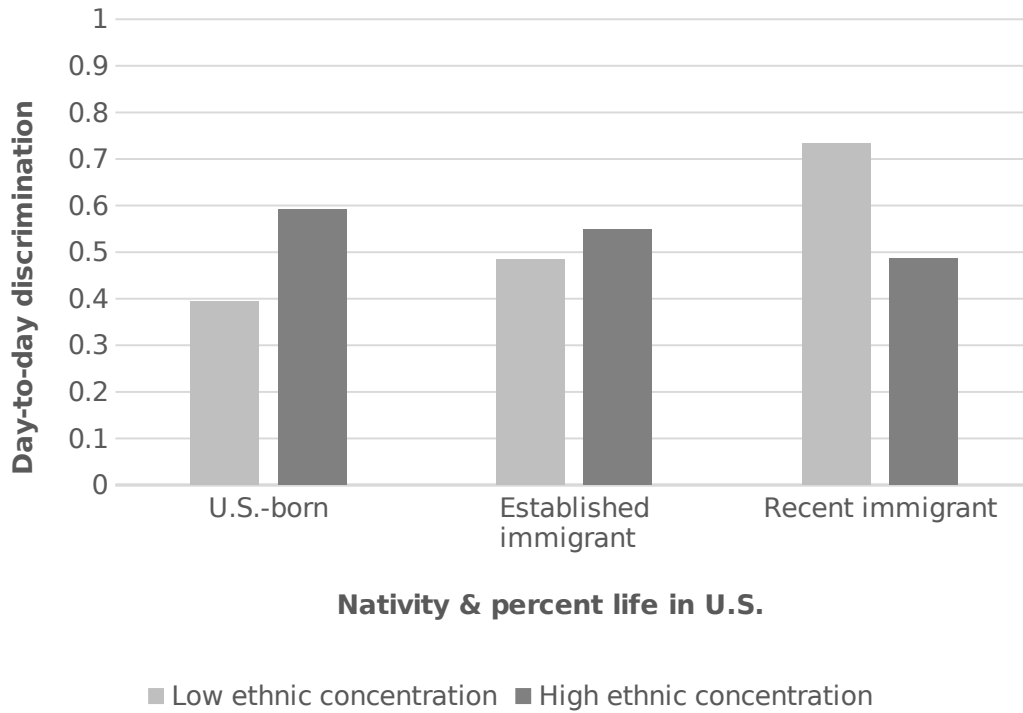
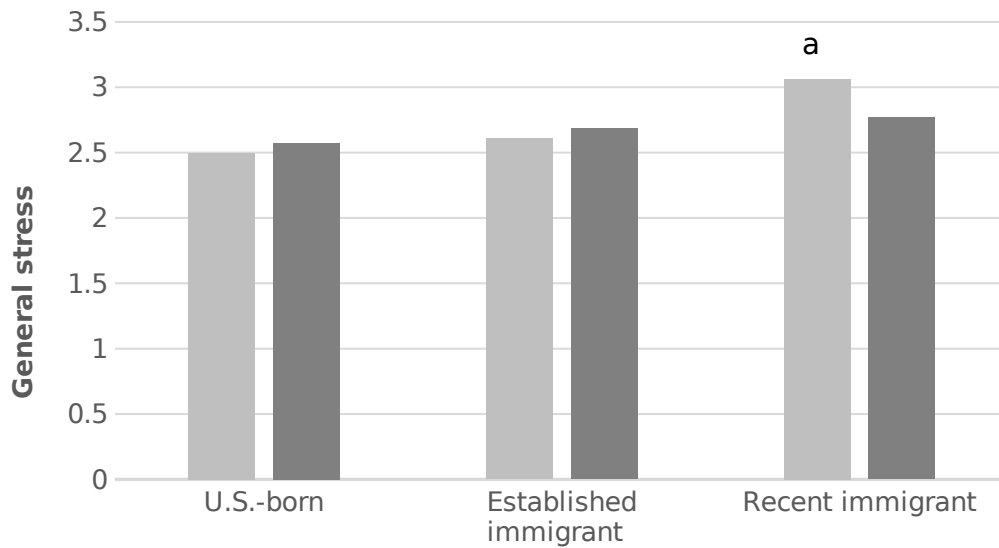


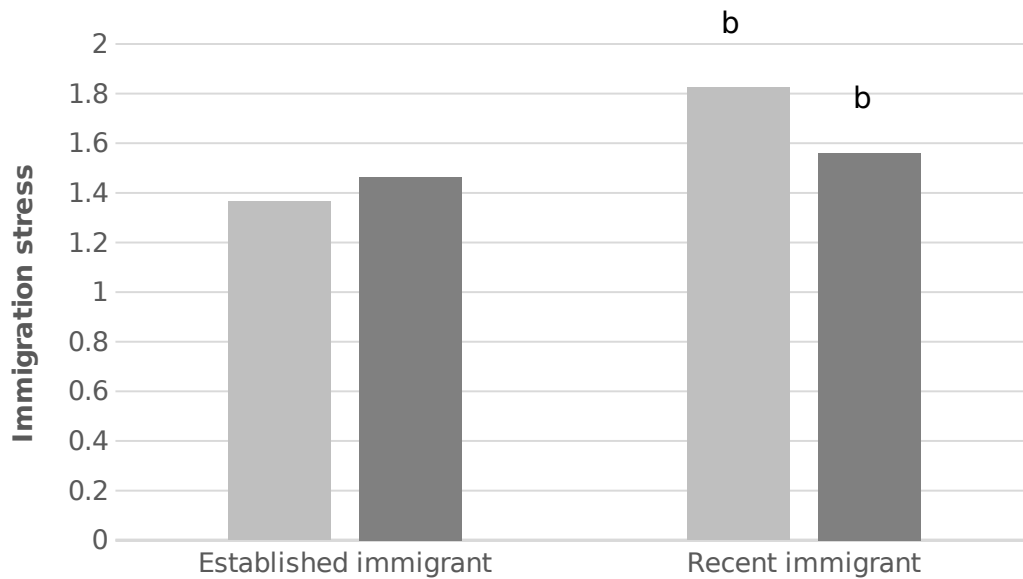
Figure 1b. General stress



**Nativity & percent life in U.S.**

■ Low ethnic concentration ■ High ethnic concentration

Figure 1c. Immigration stress



**Nativity & percent life in U.S.**

■ Low ethnic concentration ■ High ethnic concentration

*Note.* Vertical lines represent 95% confidence intervals. Graphs control for age, marital status, Asian ethnicity, education, neighborhood socioeconomic status, neighborhood safety, and neighborhood problems.

a = statistically different from U.S.-born living in neighborhoods with low ethnic concentration.

b = statistically different from established immigrants living in neighborhoods with low ethnic concentration.  
p<0.05





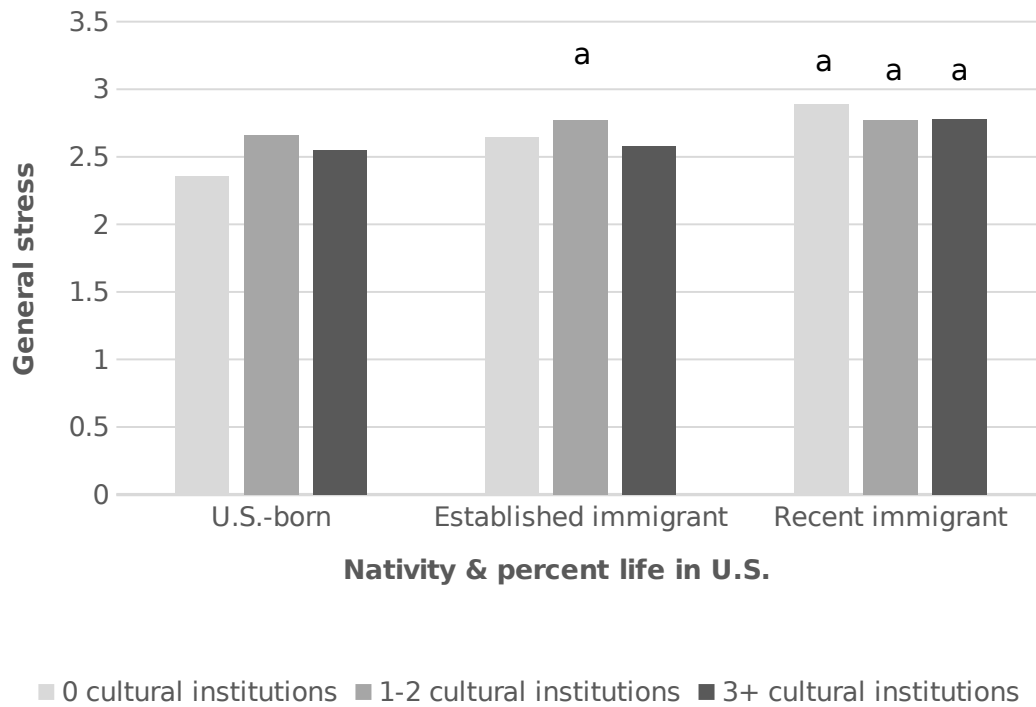
1-2													0.0
	-0.03	0.05	0.05	0.09	0.09	0.07	0.30*	0.11	0.02	0.06	0.04		9
3+													0.0
	-0.13*	0.05	-0.12	0.09	-0.01	0.06	0.19	0.12	-0.06	0.05	-0.13		7
1-2 cultural institutions x established immigrant			-0.03	0.14			-0.18	0.19			ref		
1-2 cultural institutions x recent immigrant			-0.21	0.12			-0.43*	0.15			-0.03		0.1
3+ cultural institutions x established immigrant			0.13	0.13			-0.26	0.18			ref		
3+ cultural institutions x recent immigrant			-0.09	0.11			-0.30†	0.14			0.09		0.0
R <sup>2</sup>	0.17		0.20		0.12		0.13		0.20		0.24		

Note. SES = socioeconomic status

<sup>a</sup> Relative to married. <sup>b</sup> Relative to Chinese. <sup>c</sup> Relative to college graduate. <sup>d</sup> Relative to high neighborhood SES. <sup>e</sup> Relative to U.S.-born for day-to-day discrimination and general stress. Relative to established immigrants for immigration stress. <sup>f</sup> Relative to zero cultural institutions.

\*\* p<0.0017, \* p<0.017, † p<0.05; p-values adjusted using Šidák correction for multiple comparisons.

Figure 2  
*Neighborhood cultural institutions predicting general stress, moderated by nativity and time in the U.S.*



*Note.* Vertical lines represent 95% confidence intervals. Graphs control for age, marital status, Asian ethnicity, education, neighborhood socioeconomic status, neighborhood safety, and neighborhood problems. a = statistically different from U.S.-born living in neighborhoods with 0 cultural institutions.  $p < 0.05$

**Public Significance Statement:**

This study finds that for Asian American women, living in ethnic enclaves may help to reduce discrimination and stress experiences for recent immigrants, and may not help or even exacerbate discrimination and stress for established immigrants and U.S.-born. Additionally, it highlights the importance of two different aspects of ethnic enclaves—ethnic concentration and cultural institutions—in protecting against discrimination and stress for recent immigrants.